

CLAIMS

1. A power transmission apparatus comprising:
a first power transmission member (11, 12),
5 a casing (19) provided with an opening (19k) that opens towards said first power transmission member,
a constant velocity universal joint (41, 42) connected to said first power transmission member, and
a second power transmission member (17, 18) connected to said first power transmission member via said constant velocity universal joint, wherein
10 an outer race (11a, 12a) of said constant velocity universal joint is formed integrally to a casing side end of said first power transmission member,
an inner race (17a, 18a) of said constant velocity universal joint is formed integrally to said second power transmission member, and
15 said outer race is disposed so as to block said opening.
2. The power transmission apparatus according to claim 1, wherein
said first power transmission member includes a drive shaft (11, 12),
said casing includes a diff case (19) of a differential gear, and
20 said second power transmission member includes a side gear (17, 18).
3. The power transmission apparatus according to claim 1, wherein
said first power transmission member includes a propeller shaft (111),
said casing includes a diff carrier (30) of a differential gear, and
25 said second power transmission member includes an input shaft (27) of said differential gear.
4. The power transmission apparatus according to claim 1, wherein

said first power transmission member includes a propeller shaft (111),
said casing includes a casing (230) of a power distribution apparatus, and
said second power transmission member includes an output shaft (227) of said
power distribution apparatus.

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5. The power transmission apparatus according to claim 1, wherein
said first power transmission member includes a drive shaft (311),
said casing includes a knuckle (319), and
said second power transmission member includes a hub (317).

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6. The power transmission apparatus according to claim 1, wherein an outer
surface of said outer race has a spherical configuration,
said power transmission apparatus further comprising a seal member (33, 34)
forming contact with a surface of said opening and an outer surface of said outer race.

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7. A differential gear comprising:
a side gear (17, 18), and
a first power transmission member (11, 12) connected to said side gear (17, 18)
via a constant velocity universal joint (41, 42), wherein
an end of said first power transmission member has an inner surface (11c, 12c)
defining an internal cavity (11d, 12d) that opens towards said side gear,
an outer race (11a, 12a) of said constant velocity universal joint is formed at said
inner surface,
an inner race (17a, 18a) of said constant velocity universal joint is formed at a
surface of said side gear.

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8. A differential gear comprising:
an input shaft (27), and

a first power transmission member (111) connected to said input shaft via a constant velocity universal joint (141), wherein

an end of said first power transmission member has an inner surface (111c) defining an internal cavity (111d) that opens towards said input shaft,

5 an outer race (111a) of said constant velocity universal joint is formed at said inner surface, and

an inner race (27a) of said constant velocity universal joint is formed at a surface of said input shaft.

10 9. A power distribution apparatus comprising:

an output shaft (227), and

a propeller shaft connected to said output shaft via a constant velocity universal joint (241), wherein

15 an end of said propeller shaft has an inner surface (111c) defining an internal cavity (111d) that opens towards said output shaft,

an outer race (111a) of said constant velocity universal joint is formed at said inner surface, and

an inner race (227a) of said constant velocity universal joint is formed at a surface of said output shaft.

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10. A hub apparatus comprising:

a hub (317), and

a power transmission member (311) connected to said hub via a constant velocity universal joint, wherein

25 an end of said power transmission member has an inner surface (311c) defining an internal cavity (311d) that opens towards said hub,

an outer race (311a) of said constant velocity universal joint (341) is formed at said inner surface, and

an inner race (317a) of said constant velocity universal joint is formed at a surface of said hub.